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09/682,073	07/17/2001	Antonio Mugica	38146	2280

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EXAMINER

LAM, DANIEL K

ART UNIT	PAPER NUMBER
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2667

DATE MAILED: 02/11/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/682,073

Applicant(s)

MUGICA ET AL.

Examiner

Daniel K Lam

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/17/2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - On page 1, paragraph 0007, line 3, “apparati” is misspelled. It should be “apparatus” instead. On line 4, “partake” is misspelled; it should be “take part” instead.
 - In claim 1, item (b), “consist” is misspelled. It should be “consists” instead. In item (e), “decapsulate” is misspelled. It should be “decapsulates” instead. In item (f), “increment” is misspelled; it should be “incrementing” instead.
 - In claim 5, lines 6 and 8, “pass” is misspelled. It should be “passing” instead.
 - In claim 6, line 1, “helder” is misspelled. It should be “header” instead.

Corrections are required.

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented.

The misnumbered second claim 6 has been renumbered as claim 7.

The misnumbered claim 7 has been renumbered as claim 8.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Pat. No. 5,442,633 issued to Perkins et al.

Regarding claim 1, while disclosing an improved method for encapsulation and decapsulation source routing for mobile hosts, Perkins et al. discloses a hybrid distributed network comprising:

- a) Mobile host MH10 originating a packet (originating a packet at a source node); see fig. 2, and col. 4, lines 36-44.
- b) Packet having an Internet IP header, Loose Source Record Route, and data segment (Packet consists of a header, a network path, and data); see figures 3A and 3B, col. 6, lines 47-61.
- c) Encapsulating the packet using ETHERNET, X.25, or Protocols (encapsulating the packet in protocol-specific subnetwork); see fig. 1 and col. 1, lines 27-30.
- d) Sending the packet to a base station BAS 12 (passing the protocol-specific packet to the first destination router in the network path); see fig. 2.

- e) The base station BAS 12 decapsulates the packet before forwarding it over to LAN 14 (router decapsulate the protocol-specific packet); see fig. 2.
- f) The base station advances pointer pointing to the next address in the Loose Source Record Route (incrementing the next path destination index counter by one); see fig. 5 Block F, and col. 10, lines 14-17.
- g) The base station forwards the packet to the next address (using next path destination address, encapsulating the packet, and passing the packet to the next router); see fig. 5 Block G, and col. 10, lines 14-17.
- h) The LOCAL gateway GW 16 forwards the packet to the router MR 20 and beyond until it reaches another base station BAS 12 on the other side (repeating the previous five steps until the packet reaches the final destination); see fig. 2.

Regarding claim 3, in addition to disclosing the steps (b) to (h) discussed in claim 1 in the previous paragraph, Perkins et al. further discloses the acknowledgment packet utilizing the reversed source route in the ROUTE DATA in the received packet for returning the reply; see col. 8, lines 44-53.

Regarding claim 6, in addition to disclosing the limitation regarding claim 1, Perkins et al. further discloses the IP packet contains TYPE OF SERVICE (Packet Type and Quality of Service), IDENTIFICATION (Packet ID), LENGTH (Network Path Length), IHL (Data Pointer), ROUTE DATA (Network Path Pointer Table), and POINTER (Network Path Destination Index and Multicast Pointer) fields; see figures 3A and 3B.

Regarding claim 7, in addition to disclosing the limitation regarding claim 1, Perkins et al. further discloses the Route Data contains Internet 32-bit IP address which is well-known in the art to contain network class and network address (Network Path sections contains Network Type and Network Address); see col. 7, lines 3-5.

Regarding claim 8, in addition to disclosing the limitation regarding claim 1, Perkins et al. further discloses the length of data section is TOTAL LENGTH minus IHL (Data Length) and one data segment which is not shown but is well-known in the art (Data Segment); see fig. 3A.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. No. 5,442,633 issued to Perkins et al. in view of U. S. Pat. No. 5,280,480 issued to Pitt et al.

Regarding claim 2, although Perkins et al. discloses the method of source routing for mobile hosts over a hybrid distributed network, discussed in claim 1 in the previous paragraph, he does not disclose the subnet encapsulation packet has a header containing a destination address. Pitt et al. discloses a destination address DA containing in the MAC HEADER FIELDS of a subnet frame (encapsulation packet has an encapsulation header that contains a destination address); see fig. 8A, and col. 5, lines 27-30.

Therefore, it would have been obvious to those having ordinary skill in the art, at the time of invention, to incorporate a destination address field within the encapsulation header of the subnet packet so that any router or bridge connected to the subnet can use it to forward the packet to its next destination as taught by Pitt et al. See col. 5, lines 23-26.

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. No. 5,442,633 issued to Perkins et al. in view of U. S. Pat. No. 6,567,417 issued to Kalkunte et al.

Regarding claim 4, in addition to disclose the limitations regarding claim 1 in the previous paragraph, Perkins et al. further discloses the method comprising the additional steps of

- Encapsulating the broadcast packet in a level 2 LAN 14 subnetwork (encapsulating the broadcast packet in a protocol-specific packet used the destination subnetwork); see fig. 2, and col. 4, lines 36-44.
- Passing the broadcast packet to the base stations BAS 12s (passing the broadcast packet to the nodes on the destination subnetwork); see fig. 2.

However, he does not disclose identifying the packet as a broadcast packet.

Kalkunte et al. discloses using an op-code value of 2 to identify the packet as a broadcast packet; see col. 5, lines 28-30.

Therefore, it would have been obvious to those having ordinary skill in the art, at the time of invention, to incorporate packet type field in the packet header so that different types of incoming packets can be identified quickly and, as a result, can be forwarded quicker, as taught by Kalkunte et al. See col. 2, lines 52-55, and col. 3, lines 8-11.

Regarding claim 5, in addition to disclose the limitations regarding claim 1 in the previous paragraph, Perkins et al. further discloses the method comprising the additional steps of

- Encapsulating the multicast packet in a level 2 LAN 14 subnetwork and passing it to the base stations BAS 12s (encapsulating the multicast packet in a protocol-specific packet used by the subnetwork if it supports multicasting); see fig. 2.

Kalkunte et al. discloses further discloses

- An op-code value of 3 indicating the packet is a multicast packet; see col. 5, lines 43-45.
- A table containing destination port and module ID directs where the multicast packet should be forwarded to (passing the multicast packet to the nodes specified in the network address section of the packet, if the subnetwork does not support multicasting); see col. 5, lines 55-58.

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Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel K. Lam whose telephone number is (703) 305-8605. The examiner can normally be reached on Monday-Friday from 8:30 AM to 4:30 PM.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

DKL: dkl *dkl*
February 6, 2004

Chau T. Nguyen

CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
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